AUDIO SWEEP OSCILLATOR

NEW!

PRODUCTS

from

VARI-L CO.

for

1964

VARI-L®
VARIABLE INDUCTOR

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STAMFORD, CONNECTICUT

March 23 - 26, 1964

Dear I.E.E.E. Convention Visitor:

We thank you for stopping at our booth and are pleased to present to you this letter summary of the new products we had on display. Of course we hope you became acquainted, if you weren't already, with our basic line of VARI-L electrically variable inductors, which we have been proudly exhibiting here for the last ten years. If you want more information about them, we will be happy to send you a catalogue and/or have someone call on you. A comprehensive condensed listing is quickly available in EEM, EBG, or the VSMF microfilm file.

We hope you also saw the DEVELOBOARD circuit breadboarding module, a new product which we introduced last year. Many labs have adopted it as their standard system for putting semi-conductor circuits together in a hurry, and chances are that one of the engineers in your company has one and will be glad to show it to you. If you can't locate a DEVELOBOARD for first-hand observation, let us know, and we'll send you a small sample.

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VARI-F Model SA-17 Audio Sweep Oscillator

Model SA-17 is a self-contained audio generator housed in a MIL-T-27 "HB" size can. It is fitted with an octal connector, making it suitable for use as a test instrument on the bench or as a built-in component. By supplying it with a control current varying between 0 and 150 ma. it can be swept over a frequency range of 100:1 without band switching, and it is thus extremely useful in wide band investigations of transducers, amplifiers, filters, etc.. The type you have seen on display (Model SA-17A) covers from 100 cps. to 10 KC. - all fundamental frequencies - not a beat note, and is the first in a series of similar modules with graduated ranges up to approximately 25 MC. Model SA-17B, which will be in production shortly, covers from 250 cps. to 25 KC., and Model SA-17C, a little farther in the future, will handle the 500 cps. to 50 KC. range.

Sweep current for our flashing light display, where a dwell was wanted at each end of the range, is supplied by a motor-driven potentiometer, but it can easily be generated with the ideal triangular wave form by conventional solid-state circuitry. If there is sufficient demand, we will make available a companion driver module for use with the SA-17

SPECIFICATIONS - VARI-F Model SA-17A

FREQUENCY RANGE: 100 cps. to 10 KC., all fundamentals, with control current of 0-150 ma. into 75±10% ohms.

OUTPUT:	.7 volts RMS into 600 ohm load, flat to within 3 DB across the range.
INPUT:	25 ± 20% VDC @45 ma., nominal.
SWEEP CHARACTERISTICS:	Capable of being controlled by DC or of being swept by AC with sine-wave or triangular wave-form - sweep frequencies up to 10 cps.
DISTORTION:	5% (Measured while not being swept)
LINEARITY:	See curve below.
TEMPERATURE CHARACTERISTICS:	Capable of rated operation at temperatures from 0 to +50° C. Frequency drift with temperature, .6%/°C., max. - lower over a considerable portion of the range.
HYSTERESIS:	Is highest at the low frequency end of the range. 100-250 cps.: 7%; 250-600 cps.: 1%; 600 cps. up: .5%.
SIZE & WEIGHT:	See outline drawing. Weight 1 lb., approx.
PRICE:	$195.00, lower in quantities.
AVAILABILITY:	within 3 weeks ARO, starting May 1, 1964. Will eventually become a stock item.

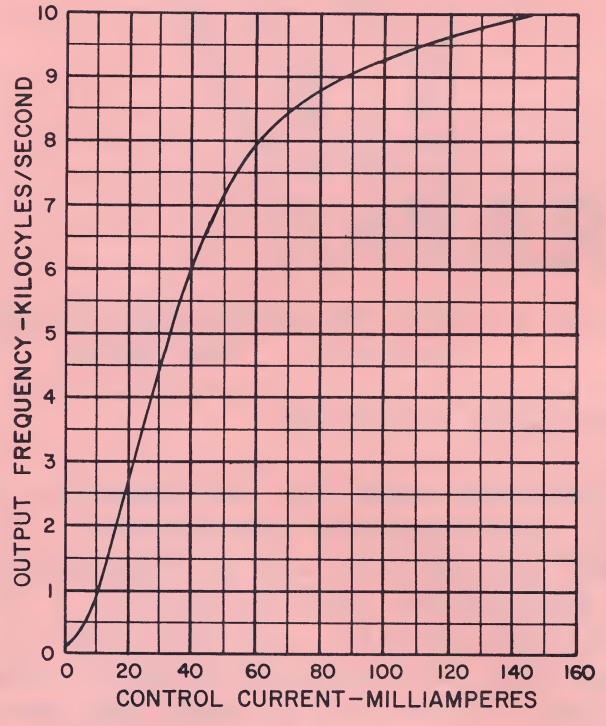

Fig. 1 Control Characteristic

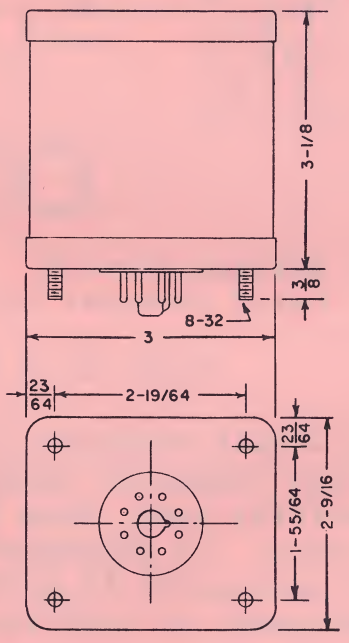

Fig. 2 Outline Drawing - SA-17A

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VARI-L C-100 series High Q - Low drift Toroidal Coils

As a result of research on core materials for VARI-L inductors, it has become possible to make fixed toroids for RF circuits which have very high Q and unusually low drift of inductance and Q with temperature. They are housed in hermetically sealed cans, internally encapsulated, and have been proved out in rigorous military environments. Specifications on a typical coil are given below, but because the needs vary widely, it is anticipated that modifications will have to be made in many cases to suit the user's requirements. Provision has been made in the packaging for taps and/or extra windings.

SPECIFICATIONS - VARI-L type C-101 toroidal coil

INDUCTANCE: 200 microhenries ±10%.
Q AT 1 MEGACYCLE: 220
DRIFT WITH TEMP: Inductance : 50 ppm/°C.; Q: will not change by more than 5 from 25-75°C.
TEMP RANGE: Recommended for use between +10 and +85° C. Storage, -55 - +85° C.
PRICE: $10.00 ea., subject to quantity discounts.
AVAILABILITY: From stock, starting May 15, 1964.

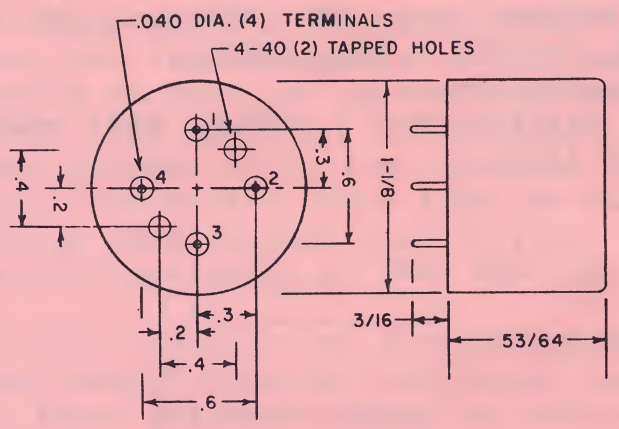

Fig. 3 Outline Drawing C-101 Toroidal Coil

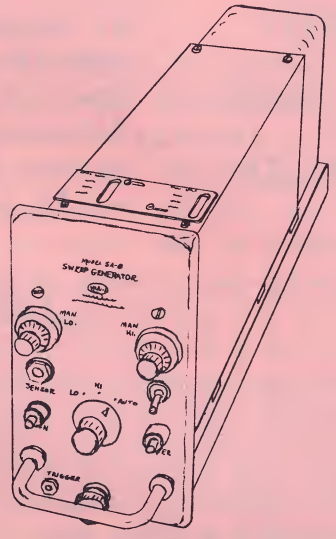

Fig. 4 SA-8 Telephone Test Sweep Generator. See below.

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Model SA-8 Telephone Test Sweep Generator

This is a beat-frequency audio sweep generator made for the specific job of testing telephone handsets, networks, and complete instruments. It is an industrial tool, made for 24 hour per day service and is completely solid state. It incorporates a VARI-L oscillator beating against a 100 KC. crystal socillator to produce a note of high quality. It has three bands, each one swept at a different frequency, the band selection being made by removal and insertion of a simple plug. Provision is made for setting the end frequencies independently and for monitoring them externally. The oscillator and sweep generator circuits are housed in a temperature stabilized compartment.

FREQUENCIES: All sweep rates locked to the 60 cps. line.
a. 400 - 4000 cps., swept at 1 cps., sawtooth
b. 600 - 1600 cps., swept at 10 cps., triangular
c. 300 - 3000 cps., swept at 20 cps., triangular
LINEARITY: Within 1%. DISTORTION: 2% max.
OUTPUT: .5 V. RMS, constant to within .2 DBV over any range.
STABILITY: 1% max. change of frequency and output voltage between 70 and 110° F.
SIZE: 4-¼ wide x 7 high x 18 long. Blue ribbon connector at the rear handles 110 volt input and audio output. Unit can be quickly removed for service.
PRICE: $1250 (1 - 3 units) Available 6 weeks ARO.